

Utilities & Engineering

Annual Report Fiscal Year 2007-08



Building Inspections

Code Compliance

EcoComplex

Erosion Control

Landfill

Plan Review

Permit Center

Recycling & Waste Reduction

Water & Sewer

Message from the Director

Dear Fellow Citizens:

Thank you for allowing us to serve you, the citizens of Catawba County, customers and clients through focusing on exemplary customer service. It is my pleasure to present to you the 2007-08 Catawba County Utilities and Engineering Annual Report reflecting the work of dedicated and skilled individuals.

The Utilities and Engineering Department functions include Administration, Building Services, Plan Review, Permit Center, Erosion Control, Local Code Compliance, Solid Waste Management including Landfill, Recycling, and Waste Reduction, and Water and Sewer Administration.

Utilities and Engineering is also responsible for Water and Sewer Construction Projects and EcoComplex Management and Development, which are reported herein. Solid Waste Management operations are fully self-supporting through the implementation of user fees incorporated into an enterprise fund with no ad valorem tax contributions. The Water and Sewer fund became an enterprise fund employing multiple revenue streams.

Special recognition goes out this year to the Utilities and Engineering staff for their teamwork in winning the 2008 National Association of Counties (NACO) Achievement Award for the Catawba County EcoComplex. The EcoComplex is designed to promote the green energy, green business, agriculture and environmental sectors. It will accommodate research involving all aspects related to biologically-derived energy recovery and use, as well as the research of alternative fuels and minimization of greenhouse gases for environmental, agriculture and energy uses.

Catawba County is a great community in which to live, work, and raise a family. The professional leadership from elected Board Members to knowledgeable and dedicated staff contributes to our excellent community.

If you have questions about any part of this report, our services, or any other Utilities and Engineering Department concerns, please feel free to contact our office by phone at 828.465.8261 or visit us on the web at <http://www.catawbacountync.gov/depts/u&e>.

Sincerely,



Barry B. Edwards, P.E.
Director



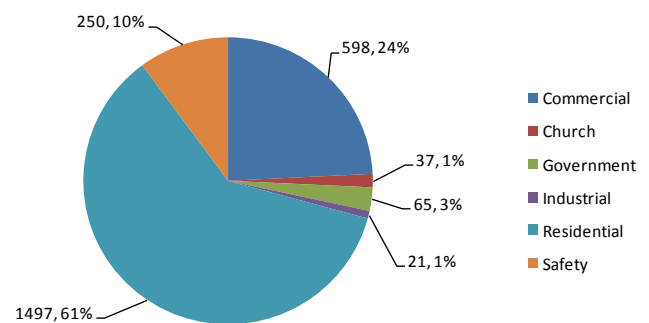
Building Inspections, Plan Review & Permit Center

The Building Services division is responsible for Plan Review, Inspections, and Permit Issuance. Building Services inspects all residential and commercial buildings in Catawba County and seven municipalities, and provides information and services to customers as they obtain the proper permits for construction. Two office locations are available for customer convenience: in the County Government Center at 100A SW Blvd in Newton and in the Hickory City Hall at 75 North Center St in Hickory. Both locations are open from 8:00 am to 5:00 pm, Monday through Friday.

Building Services operates as a self-sufficient program; thus, permit and inspection fees are designed to recover 100% of the cost of operations. A mechanism for adjusting building permit fees, specifically for Catawba County, are based on actual building construction values during the fiscal year is built into the Fee Schedule. Actual construction valuation of building permits issued during fiscal year 2007-08 for commercial, church, government, industrial, and residential construction is \$392,065,911. The total number of building permits issued is 2,468.

- 9,500 permits were issued of which 2,468 were building permits
- 41,975 inspections were performed on all types of permits

2,468 Building permits issued during 2007-08



Plan Review works closely with citizens during the pre-construction phase offering Plan Review Services, Express Plan Review, Local Option Plan Review, NC Rehab Code assistance, and Safety Inspections for Alcoholic Beverage Control, Day Cares, and Occupancy Permits as well as special events.

- 1,031 plans were reviewed
- 24 projects used the NC Rehab Code resulting in 470 inspections
- 2,552 safety inspections were performed
- 3,305 total inspections performed by plan review staff

Guiding Principles

The foundation of Building Services is its four guiding principles: protecting the public; providing the best possible customer service; promoting economic development; and ensuring consistency in the application of Codes and treatment of customers.

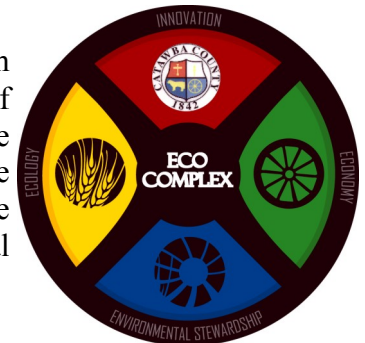
Permit Center staff issues permits for Building Services and assesses fees for other County Departments including Planning and Zoning, Environmental Health, Fire Marshal's Office and Utilities and Engineering Water and Sewer.

- 12,253 permits were issued by the Permit Center

Updates on permit payments. We are now taking credit and debit cards and e-checks over the phone and continue to accept most credit cards in person.

EcoComplex

Catawba County's EcoComplex is an innovative resource recovery system designed so that its business and research partners can reuse the waste byproducts of other EcoComplex partners. Catawba County is building a pathway to move environmental, or "green", science and products from the lab to the real world! The EcoComplex won the national 2007 Thomas H. Muehlenback Award for Excellence in Local Government and was named best in its category in the 2008 National Association of Counties Achievement Award Program.



The EcoComplex is centered in and around the **Blackburn Resource Recovery Facility** which receives around 680 tons of municipal and construction waste daily. **A Landfill Gas to Energy Electricity Generating Facility** which currently operates three engine/generator sets that have the capacity of generate approximately 3 Megawatts of electricity per hour. The engines burn the methane that is produced naturally in the landfill, generating enough electricity to power approximately 1,400 average sized homes.



Gregory Wood Products is a high-tech dimensional lumber facility employing 115 people. Its byproducts are used by another business, Pallet One, Inc. Gregory Wood Products is the largest producer of sawdust, wood shavings, bark, and other wood wastes used in a Bio-Energy Facility.

Pallet One, Inc. is the largest new pallet manufacturer in the United States and began recycling used pallets in 2008. Employing 29 people at the Catawba County location, Pallet One uses wood slats from Gregory Wood Product's waste stream as a raw material for constructing new wooden pallets. Because Pallet One is located next to Gregory Wood Products, it is able to use Gregory's waste stream as raw material with almost no transportation cost.



A Bio-Energy Facility will use sawdust, ground wood particle byproducts, and biomaterials from Gregory Wood Products, Pallet One, and the County to generate electricity, steam and heat energy. The Bio-Energy Facility will house a newly constructed wood-fired gasifier and steam production plant that is expected to produce 3 megawatt hours of electricity and 15,000 pounds of steam per hour gross. A natural gas fired boiler, with similar steam output, will serve as a backup to the main wood-fired steam production plant.

A Bio-Solids (Sludge) Processing Facility will replace the existing Regional Sludge Management Facility currently located in the Fairgrove Business Park. The new facility will have the capacity to serve the wastewater sludge management needs of Catawba County and the Unifour region for approximately twenty years.

University Research Facilities– Catawba County has partnered with Appalachian State University (ASU) to create a center for biodiesel research and production. ASU’s research will include the testing of biodiesel fuel being produced by several companies in the region and the growing of crops around the landfill to test which grow best in our climate while producing the best oils for biodiesel. Currently, canola and sunflowers are being tested. A partnership with the University of North Carolina at Charlotte will result in algae-to-biofuel research, with carbon dioxide produced by the Gas to Energy Facility used to grow algae.



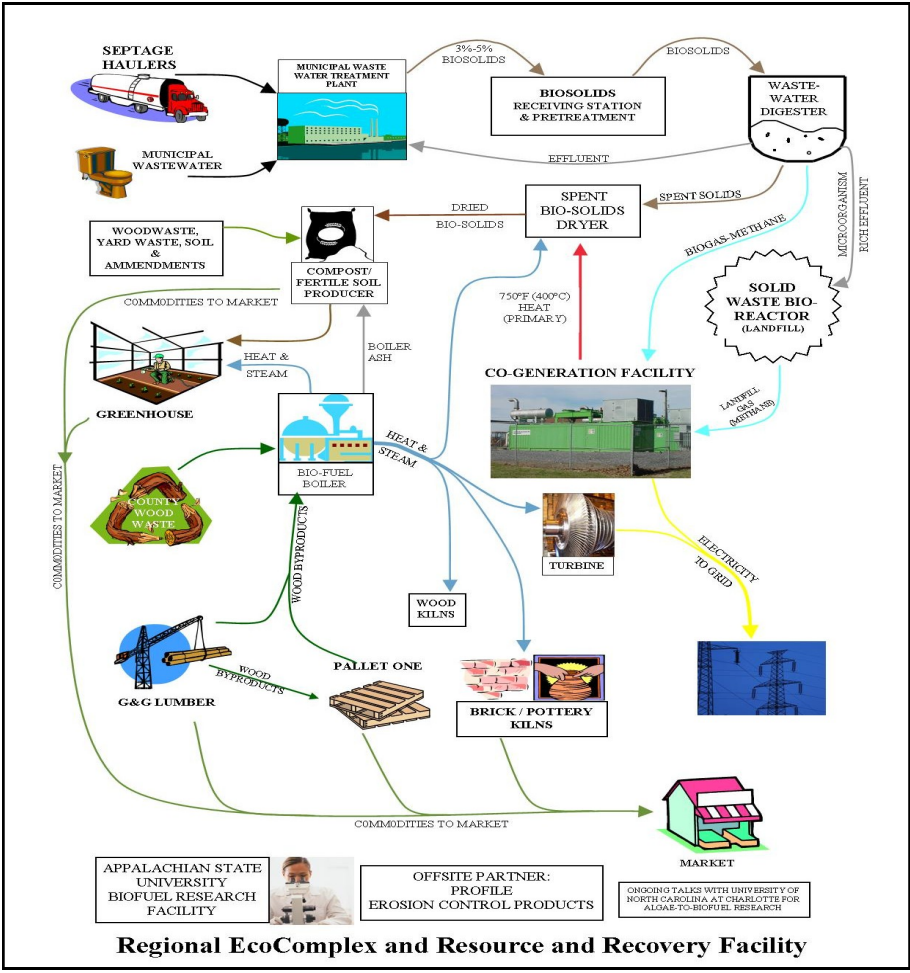
A Composting/Soils Amendment Facility–

Catawba County is talking with several composting and soil amendment companies that could become EcoComplex partners,

and with a local retailer about bagging and selling a compost/soil amendment product and, possibly, bagged mulch.



A Brick Specialties Company has verbally agreed to locate in the EcoComplex to produce specialty brick shapes and art once the expected waste streams necessary for this work are created by other EcoComplex partners. Kiln space for local potters’ use may also be added, as well as classroom type space for a community educational component.



A Greenhouse Facility– Discussions have been held with several companies considering the EcoComplex as a location for 25 to 100 acres of greenhouse space for growing vegetables and/or flowering plants once the expected waste streams are created.

Recycled Ceramic and Glass– Preliminary discussions have been held with a company considering the EcoComplex as a location for a ceramic and glass recycling facility.

Recycled Plastic Pelletization Facility– Preliminary discussions have been held with a company considering the EcoComplex as a location for a plastics pelletization facility.

Erosion Control & Local Code Compliance

Erosion Control protects regional water quality through administration of a local soil erosion and sedimentation control program, providing timely permitting service to contractors and developers. During 2007-08, projects were approved on sites disturbing an acre or more.

- **Permits and Plans**

- 37 Erosion Control permits were issued
- 40 Erosion Control plans were reviewed averaging 3.82 days each
- 222.8 Acres were disturbed
- 1,128 Inspections were performed on Erosion Control sites

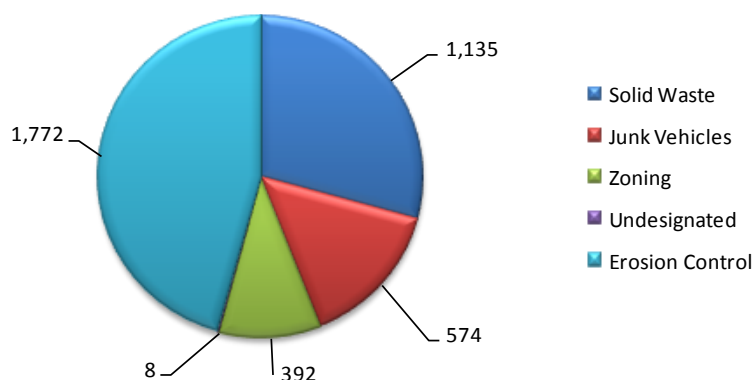
- **Violations**

- 209 Violations were investigated
- 644 Inspections were performed on violation cases
- 184 Violation cases were closed or brought into compliance

Local Code Compliance works with property owners to obtain compliance in areas of Solid Waste, Zoning, Junk Vehicles, and the Unified Development Ordinance. Staff assists citizens and property owners in multiple areas of code compliance, education, and community awareness through a team approach, providing information, and assistance to enable code compliance.

- 832 Complaints were received; 425 Solid Waste; 218 Junk Vehicles; 184 Zoning; 5 Undesignated
- 2,109 Inspections were performed; 1,135 Solid Waste; 574 Junk Vehicles; 392 Zoning; 8 Undesignated
- 681 Cases were closed or brought into compliance; 354 Solid Waste; 185 Junk Vehicles; 137 Zoning; 5 Undesignated

3,881 Inspections Performed



Landfill, Solid Waste Management & Recycling

Landfill operations responsibilities are part of the Solid Waste Management Division of the Utilities and Engineering Department. The Solid Waste Management Division ensures long-term Landfill capacity and environmentally friendly waste disposal solution for County citizens, and is responsible for the functions of Municipal Solid Waste (MSW) and Construction and Demolition (C&D) Landfills, Waste Reduction and Recycling Methods, Methane-to-Energy Recovery Facility, Convenience Centers, Household Hazardous Waste, and some development of the EcoComplex and Resource Recovery Facility.



The County Landfill and Solid Waste Management program operates as fully self-supporting through the implementation of user fees incorporated into an enterprise fund with no ad valorem tax contributions from the citizens. The viability of the Solid Waste Management Fund must be held to ensure future long-term landfill development for capacity and to provide environmentally sound waste disposal solutions, including closure and post closure costs. In accordance with North Carolina Administrative Code, Title 15, Chapter 13, a financial assurance mechanism must be filed annually to ensure the viability of closure and post closure costs, currently estimated to be \$16,066,853, which includes \$2,174,388 for the Construction and Demolition Landfill which was added to the financial assurances during fiscal year 2007-08 as required by the State.

Solid Waste Disposal State Tax was enacted by the North Carolina General Assembly, effective July 1, 2008. With this new North Carolina Solid Waste Disposal tax came Catawba County's first increase in solid waste tipping fees since 1995. Municipal solid waste disposal fees are now \$33.00 per ton. This includes the state mandated \$2 tax and a county imposed increase of \$1 to help offset rising fuel costs, maintenance, and personnel costs.



Landfill operations include a Municipal Solid Waste (MSW) and a Construction and Demolition (C&D) landfill. The Blackburn MSW Landfill is a lined cell, which ensures the safety of the ground water in the surrounding community. Tonnages in both the MSW and C&D landfills are down from last fiscal year, -10.7% and -10.9%, respectively:

- 151,007 tons of waste was received and processed in the MSW Landfill
- 38,745 tons of waste was disposed at the C&D Landfill

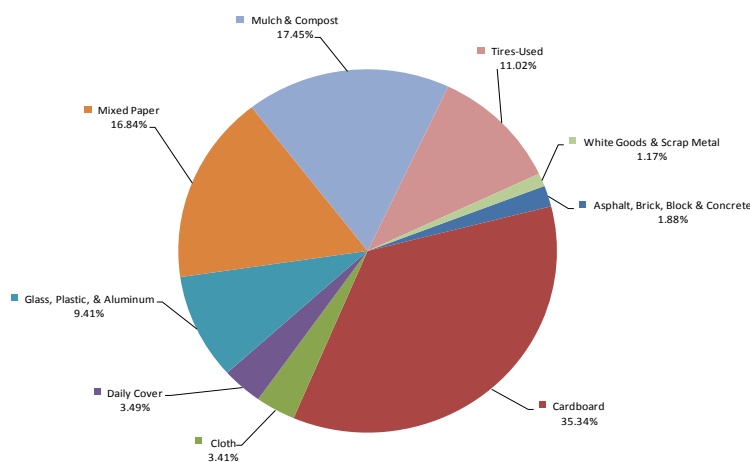
Catawba County Commercial Recycling and Waste Reduction Program recognizes area businesses for their outstanding environmental leadership and for the efforts they make in the workplace to reduce, reuse and recycle waste and to buy recycled products. Sponsored by the Catawba County Utilities and Engineering Department, the program is free and voluntary. Any business in Catawba County that practices the 4R's (reduce, reuse, recycle, rebuy) can join. Starting the program in the middle of the fiscal year, Catawba County welcomed four companies to the new partnership program. These companies and their employees are committed to being leaders in environmental stewardship.

Recycling & Waste Reduction

Catawba County Buys Recycled On August 1, 2007 Catawba County implemented a Buy Recycled Policy to support and promote an environmentally sustainable purchasing program for County Government employees. Buyers are expected to track and enter all purchases related to recycled products through a tracking program which is accessible through PeopleSoft. Between August 1, 2007 and June 30, 2008 county employees purchased a grand total of \$190,399.26 in recycled content products including general office supplies, environmentally friendly chemicals, and janitorial supplies. Also three new hybrid vehicles have been added to the county fleet. Winners were announced for top two departments for participation in this program.

- Large County Department - Public Health purchased \$27,617 environmentally friendly or recycled products.
- Small County Department - Utilities and Engineering purchased \$75,423 environmentally friendly or recycled products.

In 2007-08, 29,852 tons of waste was recycled at the EcoComplex and the Materials Recovery Facility



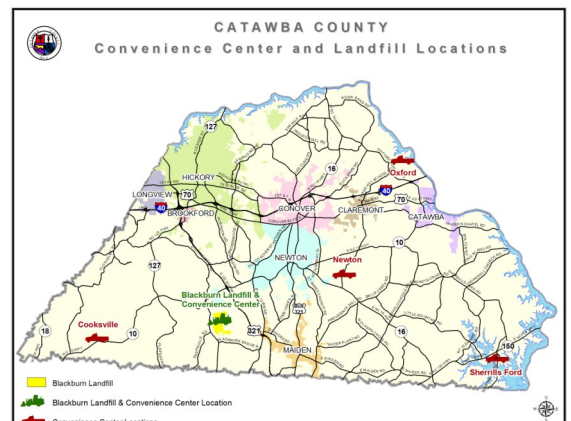
Convenience Centers are operated by the County with five locations to provide citizens with an alternative to curbside collection for waste disposal and recycling opportunities. The sites are Blackburn, Cooksville, Newton, Oxford and Sherrills Ford. The County owned centers are operated by Garbage Disposal Service as part of the solid waste franchise agreement.

Educational Outreach for Recycling, Reuse, Waste Reduction, Litter, and Household Hazardous Waste includes Earth Day, Environmental Awareness Hands-On Field Day, Boy and Cub Scout Day Camps, School Career Days, Garden Clubs, Landfill

and EcoComplex Tours, the presentation of “*The Queen of Green*”, an environmental fable theatrical production to City and County Schools, and much more.

- 50 presentations were given
- 24 tours of the landfill and EcoComplex were given
- 14,062 people were reached

To learn more about waste reduction and recycling or schedule a tour contact the County’s Waste Reduction and Recycling Coordinator at 828.465.8217 or visit us on the web at <http://www.catawbacountync.gov/depts/u&e/wastered.asp>.





Water and Sewer management and administration is a responsibility of the Utilities and Engineering Department. The Water and Sewer Division strives to provide a source of clean drinking water and environmentally friendly sewage disposal in the unincorporated areas of the county working in cooperation with the municipalities.

Growth generally signifies health and success in a community, but growth brings new challenges. All communities that experience growth and urbanization face these same challenges. As population densities increase so does the demand for

services such as water and sewer. These demands have been and will continue to be experienced in Catawba County and will increase as the County continues to develop and grow in population. The County develops an 8-year Capital Improvement Plan for water and sewer service projects, updating it annually. The following are a few of the projects currently under construction or development:

Bunker Hill/Oxford School Sewer project will provide much needed sewer service to Bunker Hill High School, Riverbend Middle School, and Oxford Elementary School, and the surrounding community. This project is currently being designed with construction anticipated to begin in spring 2009 and is estimated to be completed in late winter 2009/10.

SECC (Southeastern Catawba County) Water Supply Loop Phase III is the final phase in a three phased project which benefits all citizens of Catawba County. The looped distribution system will provide uninterrupted service during system maintenance, repairs, and emergencies. Phases I and II are complete and in service. Phase III consists of approximately 64,051 linear feet of 12-inch through 15-inch water lines, a pumping station, a storage tank, and related appurtenances. The project is under construction and is estimated to be completed in summer of 2009.



SECC (Southeastern Catawba County) Wastewater Collection System will provide a safe and economical means of wastewater disposal and treatment for Sherrills Ford Elementary School, area property owners, and future economic development. This project is being developed in two sections; northern and southern. **The northern section** consists of 64,020 linear feet of gravity and force main sewer line, 3 pumping stations, and related appurtenances. The northern sections is under construction and anticipated being complete in summer of 2009. **The southern section** is currently being designed consisting of approximately 85,000 linear feet of varying size sewer lines, pumping stations, and related appurtenances.

To learn more about water and sewer service in Catawba County or ask questions about a specific project contact the Utilities and Engineering Department at 828.465.8261 or visit us on the web at <http://www.catawbacountync.gov/depts/u&e/sewerpg.asp>

Catawba County Utilities & Engineering

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